

CAT® FILTERS, FLUIDS AND S-O-S<sup>SM</sup>

# CAT FILTERS



**MAINTAIN PEAK MACHINE PERFORMANCE**

**DURABLE CAT DESIGN**

**REDUCED OWNING AND OPERATING COSTS**

**SYSTEM APPROACH**





# MAINTAIN PEAK MACHINE PERFORMANCE



## DURABLE CAT DESIGN

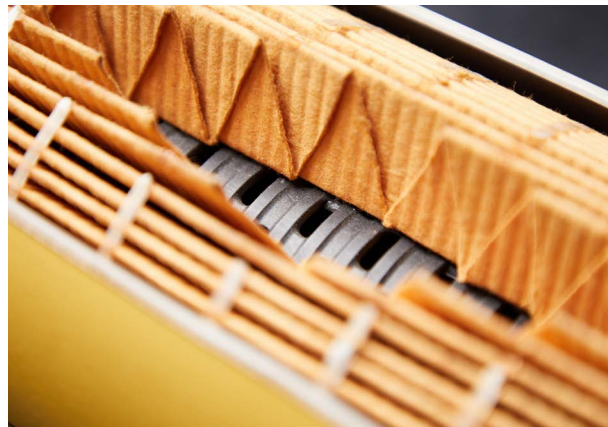
Cat Filters are designed to maintain peak performance for your machine. Urethane end caps, top grade media, spiral roving, acrylic beads, and a nylon reinforced center tube help achieve a high level of protection to keep your system clean.

## REDUCED OWNING AND OPERATING COSTS

Cat Filters are essential to keeping your equipment running smoothly and efficiently. The filters capture harmful particles and maintain system cleanliness. By investing in high quality Cat Filters, your equipment is protected and performing at its peak. Improved system health means components last longer, lowering your owning and operating costs.

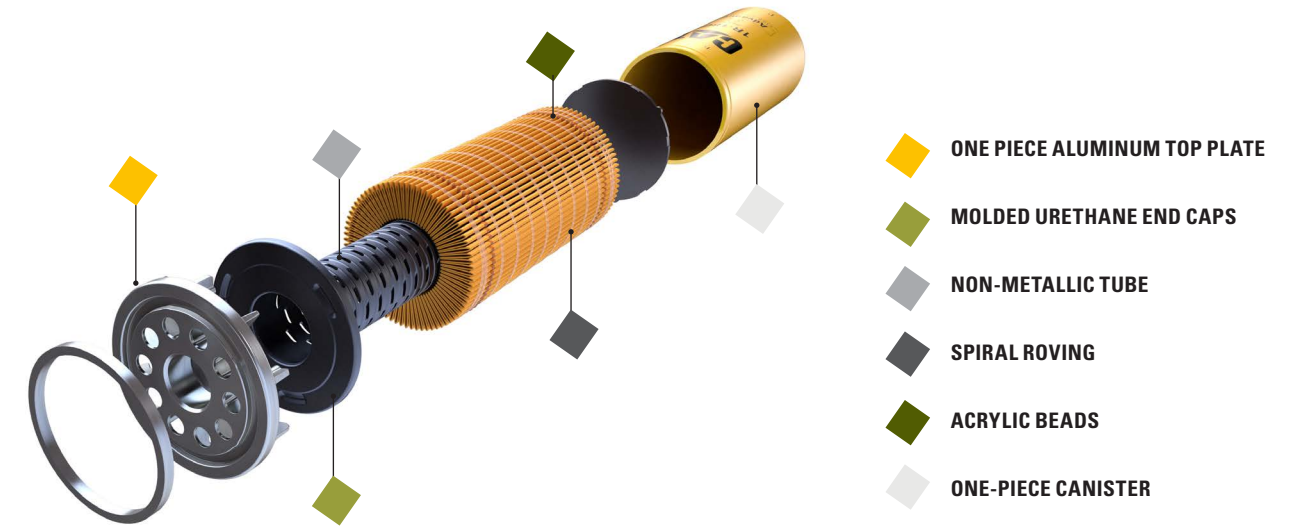
## SYSTEM APPROACH

Using Cat Filters and Cat Fluids is the first step in enhancing the system health of your equipment. The second is Cat S-O-S<sup>SM</sup> fluid analysis, a routine check-up for your oil, coolant, and hydraulic fluid. Regular fluid analysis allows you to extend drain intervals, avoid costly failures by identifying contaminants early, and help your equipment thrive. Designed with the entire system in mind, Cat Filters protect the critical systems of your machine. They are manufactured to Caterpillar's stringent specifications for your added peace of mind.



## WHAT MAKES CAT FILTERS THE PREFERRED CHOICE?

Did you know that all filters are not created equal? It's true! Over 30 years ago, Caterpillar researched whether filters actually made a difference. The results are clear. Filters matter to equipment protection and performance. By using Cat Filters, not only will your equipment last longer and perform better, but you'll also save money in the long run with less repair work and more uptime. So, when it comes to filters, the obvious choice is Cat Filters.



## CAT FILTERS ARE DESIGNED WITH ROBUST ENGINEERING TO ENHANCE THE CAT COMPONENTS AROUND THEM



### ALUMINUM TOP PLATE

Different because it allows for more thread engagement and less chance of cross threading eliminating the potential for steel slivers to enter the clean side of the engine.



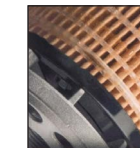
### CANISTER

- Thickest can in the industry
- One-piece design
- Increases structural strength
- Reduces potential leaks



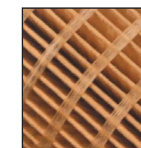
### ACRYLIC BEADING

- Prevents bunching
- Enhances media surface area for higher capacity



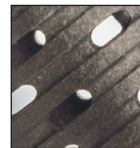
### URETHANE END CAPS

- One-piece design
- Media molded into urethane
- Eliminates possible leak paths



### SPIRAL ROVING

- Reduces pleat flex and fatigue
- Improves media surface utilization
- Increases contaminant retention



### NON-METALLIC CENTER TUBE

- Stronger than metal
- Removes the possibility of metal debris flowing into clean oil

Just as important, but harder to see, is the application-based nature of the filter design. Where competitors often create filters to general specifications, Cat Filters are designed alongside Cat equipment and Cat Fluids to ensure the entire system thrives. From flow rates to efficiencies, Cat Filter design engineers work to enhance the performance of the equipment for the most rugged applications. We call it the Cat system approach.

	Engine Lube Oil	Fuel/Water Separator (primary)	Fuel (secondary)	Hydraulic	Power Train (transmission)	Engine Air	Breather
<b>Standard Efficiency</b>	30-40 µm	>20 µm	>10 µm	27-40 µm	27-40 µm	Min. 99.6%**	>50 µm
<b>Advanced High Efficiency</b>	15-30 µm	10-20 µm	4-10 µm	10-27 µm	10-27 µm	N/A	10-50 µm
<b>UHE Ultra High Efficiency</b>	<15 µm	<10 µm	<4 µm	<10 µm	<10 µm	Min. 99.9%**	<10 µm

\*\*Using ISO5011 Test method for mass separation efficiency



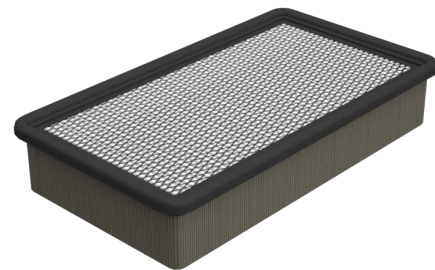
# AIR FILTERS

## CAT AIR FILTERS



Engine Air Filter

Cat Air Filters are responsible for continuously cleaning the air coming into the engine or machine cab. Air filters are designed to effectively remove contaminants such as dust, dirt, soot, and other air-borne particulates with no need to manually remove and clean them. Cat standard engine air filters are recommended for most applications that require normal-duty filtration and offer more capacity than conventional filters. Standard air filters are available for all Cat equipment models. Cat Ultra High Efficiency (UHE) Filters have longer life than standard filters. UHE filters are available for many Cat equipment models. They are recommended for fine dust applications because they have improved dirt-holding capacity which extends the filter element service life. Both filter types provide excellent protection for your machine.



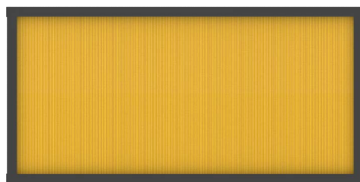
Cabin Air Filter

Cabin air filters are available in a variety of efficiencies to protect the heating and cooling system and provide a cleaner air environment for the operator. Cabin air filters meet Caterpillar's stringent specifications for performance and quality construction. Advanced filtration technology reduces airborne irritants, creating a cleaner and more comfortable working environment for the operator.

Lower restriction filters are recommended in situations where there is lower than desired cab air flow. Activated carbon filters are recommended in situations where odor is a problem for fast absorption and superior particle removal.

## FILTER REMAINING USEFUL LIFE (RUL)

The Cat Filter Remaining Useful Life (RUL) feature is available on some Cat equipment for the engine air filters. The algorithm uses sensors to capture actual engine and machine data such as air filter pressure drop to provide information on how much life is left on a filter element. RUL provides situation-specific insights into filter life based on worksite conditions and operating parameters. This allows for more insight on service timing and ensures customers get the full useful life of the filter. Consult your local Cat dealer to understand your available options.



Cabin Air Filter

## FILTER LIFE INDICATORS

Your indicator, for standard or UHE filters, keeps track of filter life for you. There are two types of UHE filter-life indicators: mechanical and electronic. When the mechanical indicator is in the red, it's time to replace the filter. Or for the electronic indicator, you'll see a notification on the display. But don't change the filter yet. You can get a false alarm if your equipment's load has been running high. Try resetting your mechanical indicator by pressing the end. It will turn red again once you restart if the filter still needs changing. To reset an electronic indicator, restart your machine. If the filter is good, you won't get another notification.



Indicator

# ENGINE OIL FILTERS



**Cat Engine Oil Filters are essential to protect your engine. They are designed to fit perfectly in today's engines, which have tighter tolerances, and provide the proper efficiency for your engine's needs. By using Cat Engine Oil Filters, you can prevent small issues from resulting in large-scale damage to your engine.**

Cat Engine Oil Filters provide more protection and performance for your engine. They decrease system contamination and are designed with increased capacity. This makes them an excellent choice for you to extend your oil drain intervals and increase performance for your engine lube oil system.

Cat Engine Oil Filters are designed to provide preferred filtration and help remove contaminants before they reach critical components in the engine. The filter utilizes spiral roving to help retain more contaminants, while urethane end caps seal the filter media to prevent any potential leak paths. A non-metallic center tube removes the possibility of metal contamination. This allows your engine to run as clean and efficient as possible.

Cat Engine Oil Filters are designed with your Cat equipment's protection in mind. They are made to Caterpillar's standards which requires rigorous lab and field tests. Plus, they are designed to work in harmony with Cat Fluids and Cat S-O-S fluid analysis to help enhance the performance of your equipment.

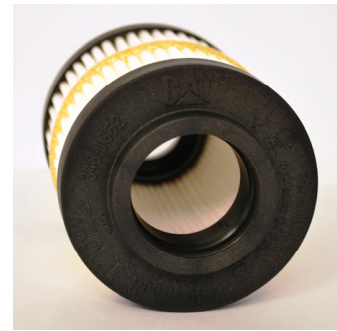


# HYDRAULIC AND TRANSMISSION FILTERS

**Cat Hydraulic and Transmission Filters are specially made for Cat hydraulic and transmission systems to keep your machine's oil clean.**

They come in different efficiency levels and help prevent cold start bypass while ensuring appropriate cleanliness levels. When used with other Cat Filters, Cat Fluids, and Cat S-O-S as part of a system solution, they provide the lowest total cost of ownership.

Cat Hydraulic and Transmission Filters are manufactured to Caterpillar's specifications and rigorously tested both in the lab and in the field. They provide your system with the protection it needs to increase performance. Cat Filters, Fluids, and Cat S-O-S are designed to work together for improved hydraulic and transmission system performance. You're also getting the support of a best-in-class dealer network backed by a range of flexible solutions, technology, tools, and more. It's all about the support that's built around your success.



"Coreless" Element



"Coreless" Element Removed from Housing

## "CORELESS" ELEMENT

Innovative design incorporates a center tube that remains in the housing for the life of the machine.

## SUSTAINABILITY BENEFITS

Nonmetallic filters that eliminate the need to replace the center tube, reducing waste.

## LOWER COST

Filter housing is reusable, leading to reduced waste and disposal cost.

## CAPACITY AND PERFORMANCE

Transmission filters provide higher capacity and improved cold-flow performance.

# FUEL FILTERS

When it comes to fuel filters, Cat is the way to go. Not only do our filters prevent dust, rust, and other debris from hindering your engine's performance, but they also promote longer-lasting components. This means that you will not have to worry about replacing your fuel injectors as often. While all parts will eventually wear down over time, Cat Filters help reduce the speed at which this happens, thus helping you save time and money overall.



Cat Fuel Filters are designed to capture and hold contaminants to increase the life of components and protect engine performance, resulting in lower owning and operating costs. The filter housing is reusable, so only the cartridge needs to be changed, making serviceability easier and reducing waste.

Clean fuel is essential for efficient and reliable performance in modern diesel engines, as well as meeting emissions standards. Cat Filters, Fluids, and Cat S-O-S are designed to protect fuel systems from contaminants, by separating the "dirty" and "clean" sides of the fuel and capturing 98.7% or better\* of the particulates. Integrated drain valves provide for cleaner filter changes, promoting the safety of technicians. The patented Clean Drain Valve lets you drain the fuel before removing the filter. The valve also locks the filter in place and makes it possible to change the filter without using tools.

\*Based on the multi-pass testing that Caterpillar uses as the standard definition for our beta ratio at the micron rating for each filter part number.

The **Cat bulk fuel filtration system** is designed to clean fuel in applications where fuel is stored for machines or engines. It removes solid particles and water from fuel using pre-filter elements, coalescer elements, and separator canisters. The pre-filter elements are made of high-quality full synthetic media and have standard or UHE ratings. The coalescer elements remove water from the fuel, then water falls to the bottom of the vessel where it is drained off. The particulate and water removal housings are equipped with differential pressure gauges that facilitate element replacement while the separator canisters, made of coated stainless steel wire screen, do not require replacement unless they are physically damaged. These systems have been the standard for cleaning large volumes of fuel in the airline and petroleum industries for over 50 years and are suitable for remote day tank or fuel truck applications.





# A SYSTEM APPROACH ENHANCE MACHINE HEALTH WITH CAT FILTERS, CAT FLUIDS, & CAT S-O-S FLUID ANALYSIS



**Caterpillar component engineers design and test Cat Filters and Fluids alongside Cat equipment to ensure system efficiency. Routine Cat S-O-S fluid analysis helps to extend drain intervals, identify contaminants early, avoid failures, and improve equipment performance. This consistent engineering design process delivers the peace of mind that comes with owning a Cat machine.**

Cat Fluids provide increased performance and reliability to your equipment. With rigorous standards, quality testing, and experts in the field weighing in on the fluid designs, Cat Fluids will last longer and extend drain intervals. This means that your system runs cleaner, your machine performs better, and your components last longer.

Cat Filters are essential to keeping your equipment running smoothly and efficiently. The filters capture harmful particles and maintain system cleanliness. By investing in quality Cat Filters, your equipment is protected and performing at its peak. Not only will you benefit from improved system health, but you will also see lower owning and operating costs, overall.

## MORE THAN PARTS AND COMPONENTS

When you buy Cat parts, components, or equipment, you get so much more. You also get the support of a best-in-class dealer network, backed by a range of flexible solutions, technology, tools and more.



### CUSTOMER VALUE AGREEMENTS

Cat Customer Value Agreements (CVAs) are the easiest way to get Cat Filters and Fluids — delivered right to you, right on time for maintenance. CVAs also offer an Equipment Protection Plan and key machine insights right on your phone. It is a one-stop solution to keep your machine easy to own and ready to work. That is a CVA.

### FINANCING & EXTENDED PROTECTION

Cat Financial offers tailored financing options for your business such as buying equipment, protecting investments beyond the standard warranty, and using equipment equity to drive business growth. Plus, you can manage your online account anywhere, any time and using any device.

### CAT INSPECT

Access your equipment data on your mobile device. This easy-to-use app lets you capture inspection data and integrates with your other Cat data systems, so you can keep a close eye on your fleet.

### CAT FLUIDS

From unique design to proven results, Cat Fluids deliver enhanced protection for your Cat equipment.

### CAT® S-O-S<sup>SM</sup> FLUID ANALYSIS

This routine check-up for your oil, coolant and fuel delivers valuable insights you can use to prevent unexpected failures and unplanned downtime.

### HYDRAULIC HOSE & COUPLINGS

Cat Hose and Couplings exceed industry standards to assure performance across all makes and all models.

### HYDRAULIC PUMPS & MOTORS

Precisely matched to your machine specs, Cat Pumps and Motors protect your productivity and profits.

### HYDRAULIC CYLINDERS & RODS

Cat Hydraulic Cylinders and Rods can help protect the muscles of your machine by increasing productivity and part life.

### EASY TO USE CODES

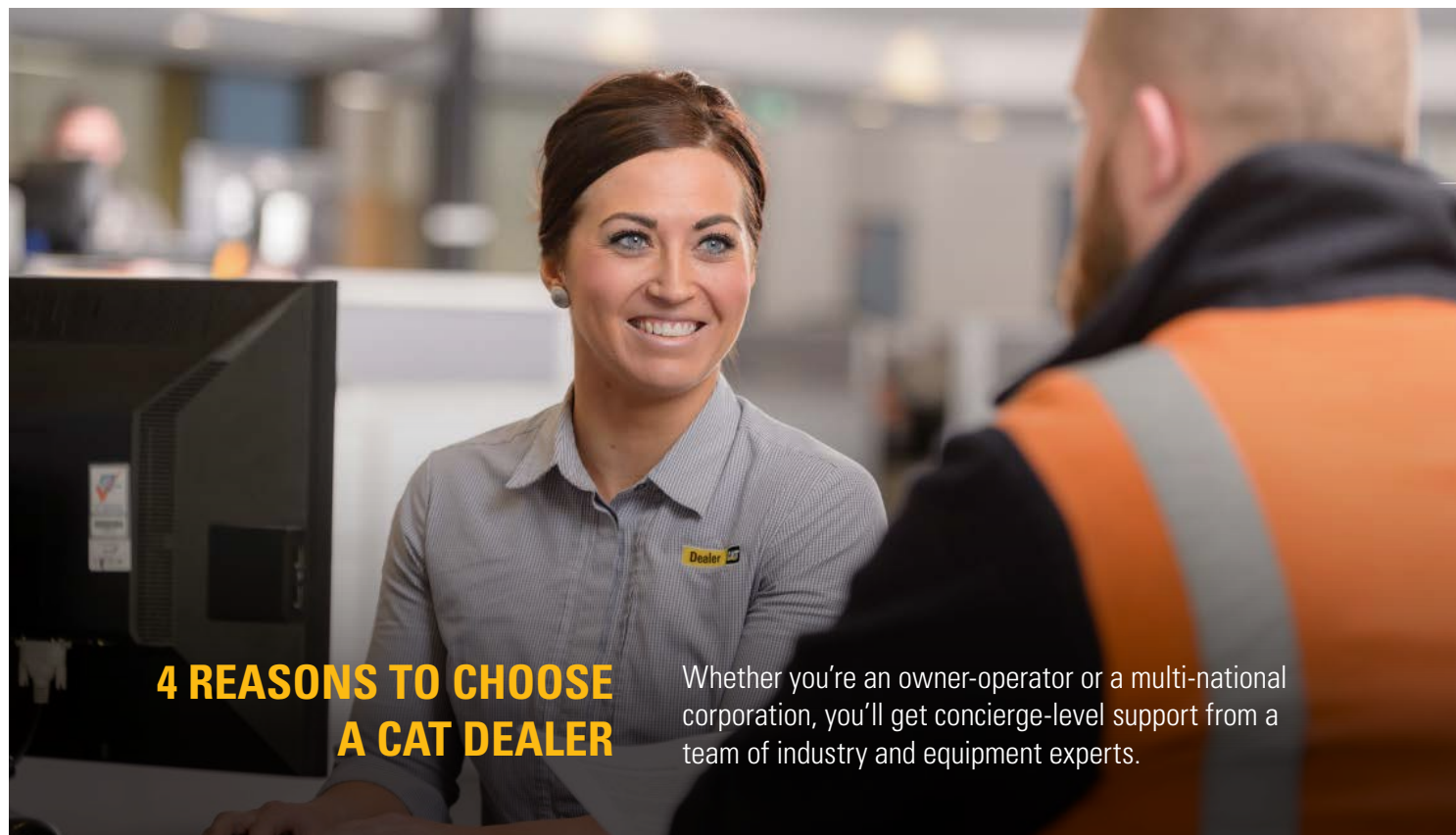
Scanning our product codes leads you to a website where you can find your local Cat dealer, get more information about the product, and simplify the re-ordering process for Cat Filters and Fluids. It is a convenient solution for all your equipment needs.





# THE CAT DEALER NETWORK THEY'RE NOT JUST A CAT DEALER. THEY'RE *YOUR* CAT DEALER.

You are supported by the largest, most experienced dealer network in the industry. When you collaborate with a Cat dealer, you get more than basic maintenance or repairs. You get a personal partner who will do whatever it takes to help you succeed.



## 4 REASONS TO CHOOSE A CAT DEALER

Whether you're an owner-operator or a multi-national corporation, you'll get concierge-level support from a team of industry and equipment experts.



### LOCAL PARTNERS

Cat dealers are locally operated by people who are invested in your success. Many customer-dealer relationships go back generations.



### TAILORED SUPPORT

Your Cat dealer will listen to your unique needs and find the right solution for your business, budget, and goals.



### ONE STOP SHOP

From engines to gensets to machines, your Cat dealer can support all your equipment needs, from purchase to consignment. No need to go elsewhere.



### SEASONED EXPERTS

Cat dealers employ long-tenured technicians and industry-specific experts to give you the best support possible.



CAT FILTERS, FLUIDS, AND S-O-S

# CAT FILTERS

For more complete information on Cat products, Cat dealer services and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

Materials and specifications are subject to change without notice.

Featured machines in photos may include additional equipment.

See your Cat dealer for available options.

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[www.cat.com](http://www.cat.com)

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